

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD 2-4 (SOLOMONS ISLAND ROAD) AND WHITE SANDS DRIVE IN CALVERT COUNTY. PRIOR TO SIGNALIZATION MEDIAN CHANNELIZATION AND AUXILIARY LANES SHALL BE CONSTRUCTED.

II. INTERSECTION OPERATION

THE SIGNAL SHALL OPERATE IN A NEMA 3-PHASE, SEMI-ACTUATED MODE.

III. CONTROLLER REQUIREMENT

A SEMI-ACTUATED, EIGHT PHASE CONTROLLER WITH TWO (2) FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE INSTALLED.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC DURING SIGNAL INSTALLATION.

PROJECT CONTACTS

THE CONTACTS FOR THIS PROJECT ARE AS FOLLOW:

DISTRICT 5

MR. LARRY ELLIOTT  
ASST. DIST. ENGR., TRAFFIC  
410-841-1003

MR. CHARLES GEORGE  
ASST. DIST. ENGR., MAINTENANCE  
410-841-1002

MR. JOHN MAYS  
UTILITIES ENGR.  
410-841-1005

MR. MARK COBLENTZ  
ASST. DIST. ENGR., CONSTRUCTION  
410-841-1004

THE OFFICE OF TRAFFIC

MR. RICHARD DAFF  
CHIEF, TRAFFIC ENGINEER  
410-787-7630

MR. ED RODENHIZER  
TEAM LEADER, SIGNAL OPERATIONS  
410-787-7652

MR. EUGENE BAILEY  
TEAM LEADER, SIGNAL OPERATIONS  
410-787-7676

MR. DAVE SCHWARTZ  
SUPPLY OFFICER, SIGNAL WAREHOUSE  
410-787-7666

EQUIPMENT LIST B

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CATEGORY CODE NUMBERS	QUANTITY	DESCRIPTION
203030	2 CY	TEST PIT EXCAVATION
585624	45 LF	24" WHITE THERMOPLASTIC PAVEMENT MATERIAL
800000	540 LF	2" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
801004	2.5 CY	CONCRETE FOR SIGNAL FOUNDATION
801104	36 LF	4" X 4" WOOD POSTS
801711	12 SF	REMOVE EXISTING GROUND MOUNTED SIGNS
802501	140 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
805115	360 LF	3" PVC SCHEDULE 80 ELECTRICAL CONDUIT (PUSHED / BORED)
805135	140 LF	3" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
805140	10 LF	4" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
810555	2 EACH	MICRO PROBE W/ 1000' 4-CONDUCTOR LEAD-IN CABLE (NO. 22 AWG)
811001	9 EACH	ELECTRICAL HANDHOLE
811002	3 EACH	REMOVE ELECTRICAL HANDHOLE
818021	1 EACH	MAST ARM POLE WITH TWIN 50 FT. MAST ARMS
837001	2 EACH	3/4" X10' GROUNDING RODS
860272	21 EACH	12" VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860274	3 EACH	12" OPTICALLY PROGRAMMABLE SIGNAL HEAD SECTION
861104	470 LF	2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
861107	100 LF	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
861108	750 LF	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
861116	400 LF	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)
862101	1400 LF	1-CONDUCTOR ENCASED IN FLEXIBLE PVC CONDUIT (NO. 14 AWG)
862102	400 LF	SAWCUT FOR LOOP DETECTORS

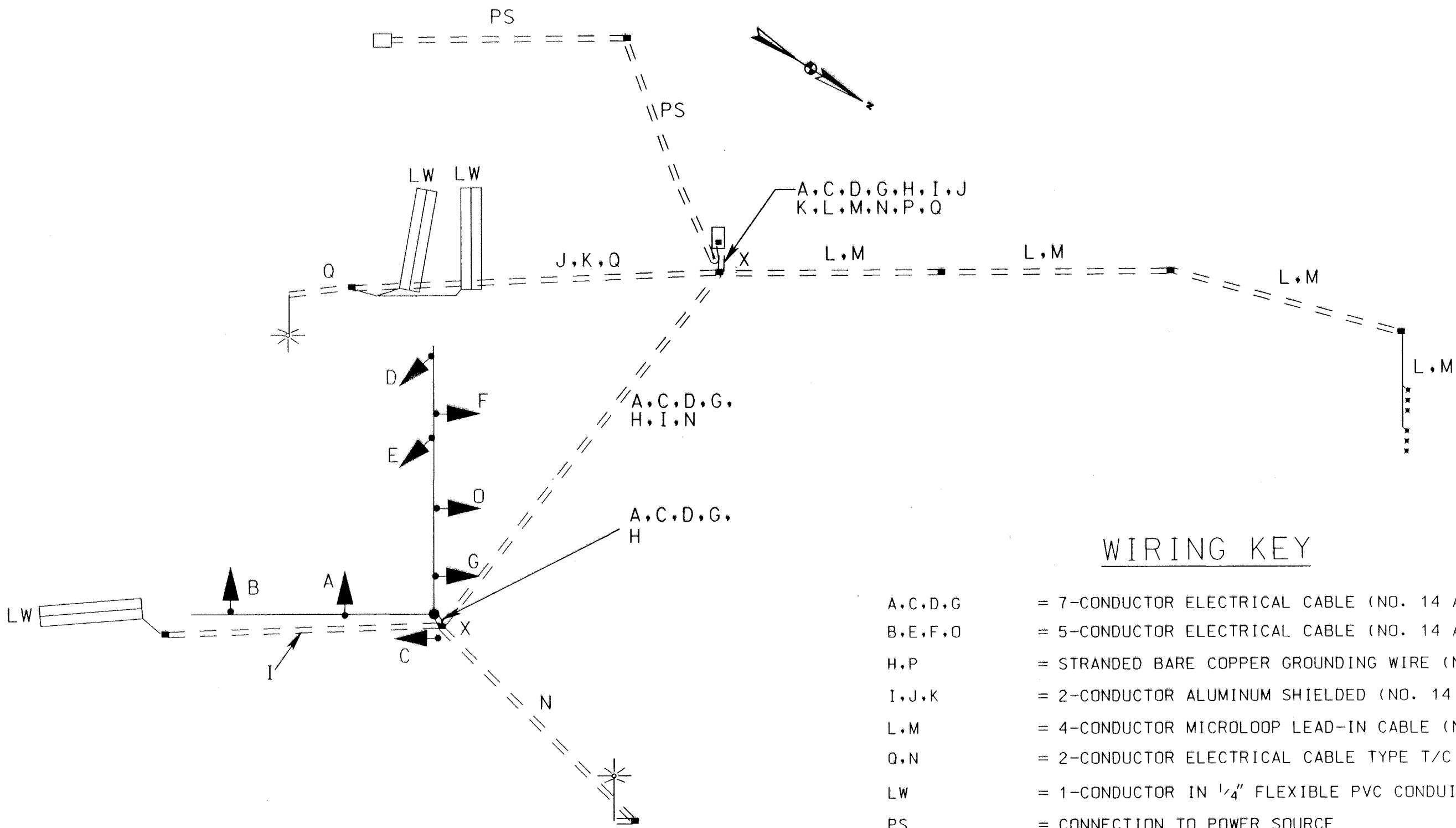
PHASING SEQUENCE CHART

	1	2	3	4	5	6	7	8	
	R Y G	R Y G	FL Y G	R Y G	R Y G	R Y G	R Y G	R Y G	
PHASE 2	FL R	FL R	FL R	G	G	G	R	R	↑
PHASE 2 CHANGE	FL R	FL R	FL R	Y	Y	Y	R	R	↶
PHASE 3	G	G	G	R	R	R	R	R	↑
PHASE 3 CHANGE	Y	Y	Y	R	R	R	R	R	↷
PHASE 4	R	R	R	R	R	R	G	G	↷
PHASE 4 CHANGE	R	R	R	R	R	R	Y	Y	↶
FLASHING OPERATION	FL R	FL R	FL R	FL Y	FL Y	FL Y	FL R	FL R	↑ ↷ ↶

R = RED  
Y = YELLOW  
G = GREEN  
FL = FLASHING

↶ R = RED ARROW  
↶ Y = YELLOW ARROW  
↶ G = GREEN ARROW

WIRING DIAGRAM (N.T.S.)



WIRING KEY

A.C.D.G	= 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B.E.F.O	= 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
H.P	= STRANDED BARE COPPER GROUNDING WIRE (NO. 6 AWG)
I.J.K	= 2-CONDUCTOR ALUMINUM SHIELDED (NO. 14 AWG)
L.M	= 4-CONDUCTOR MICROLOOP LEAD-IN CABLE (NO. 22 AWG)
O.N	= 2-CONDUCTOR ELECTRICAL CABLE TYPE T/C
LW	= 1-CONDUCTOR IN 1/4" FLEXIBLE PVC CONDUIT (NO. 14 AWG)
PS	= CONNECTION TO POWER SOURCE
X	= GROUNDING ROD

EQUIPMENT LIST A

A. EQUIPMENT TO BE SUPPLIED BY THE SHA AND INSTALLED BY THE CONTRACTOR

CATEGORY CODE NUMBERS	QUANTITY	DESCRIPTION
871117	1 EACH	EIGHT-PHASE FULLY-ACTUATED, SOLID STATE DIGITAL CONTROLLER. HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET WITH METER AND DISCONNECT SWITCH.
801607	143 SF	SHEET ALUMINUM SIGNS TO CONSIST OF: - 2-48"X48" W3-3 SIGN W/ "NEW" PANEL AND FLAG ASSEMBLY (GROUND MOUNTED) - 1-60"X36" R10-6(1) (MAST ARM MOUNTED) - 3-96" X 16" D 3-(2) (MAST ARM MOUNTED) - 1 ROUTE MARKER ASSEMBLY (12 SF) (GROUND MOUNTED) - 1 ROUTE MARKER ASSEMBLY (26 SF) (SIGNAL POLE MOUNTED)

GI-01

REVISIONS



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 2-4 AT WHITE SANDS DRIVE



Jacobs Civil Inc.  
100 South Charles Street  
Tower Two, Suite 1000  
Baltimore, Maryland 21201  
410-837-5840 Fax: 410-837-3277

DRAWN BY: C.R.W.	F.A.P. NO. SEE TITLE SHEET	TS NO. 4156	SHEET NO. 18 OF 18
CHECKED BY: G.L.G.	S.H.A. NO. CA4055176		
SCALE: N.T.S.	COUNTY: CALVERT	T.I.M.S. NO. E994	
DATE: 3/26/02	LOG MILE: 02002008.75		